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15. The gypsum wallboard of claim 9 wherein the adhesive binder comprises predominantly an acrylic adhesive binder and the acrylic adhesive binder is a thermoplastic.

16. The gypsum wallboard of claim 15 in which the thermoplastic acrylic adhesive binder has a glass transition temperature of at least about 20° C., but not above about 115° C.

17. The gypsum wallboard of claim 15 in which the thermoplastic acrylic adhesive binder has a glass transition temperature of at least about 30° C., but not above about 55° C.

18. The gypsum wallboard of claim 9 wherein the coating on the coated non-woven glass fiber mat has a dry weight basis of about 30 to about 60 pounds per 1000 square feet of said coated mat.

19. The gypsum wallboard of claim 18 wherein the gypsum core includes a water-resistant additive in an amount sufficient to improve the water-resistant properties of the core.

20. The gypsum wallboard of claim 19 wherein the water-resistant additive comprises at least one of a wax emulsion, an organopolysiloxane and a silicate.

21. A gypsum wallboard comprising:

a gypsum core having a planar first face and a planar second face;

a coated non-woven glass fiber mat facing material suitable for level 4 finishing adhered to and covering at least one of the planar first face and the planar second face of the gypsum core, said coated non-woven glass fiber mat facing material having been contacted (i) on a non-coated side and (ii) during preparation of the wallboard with an aqueous gypsum slurry that sets to form the gypsum core,

wherein the non-woven glass fiber mat facing material comprises glass fibers wherein at least 90 wt percent of the glass fibers have a fiber diameter of about 11 microns and at least 90 wt. percent of the fibers have a fiber length between ¼ and ¾ inch, the glass fibers of the non-woven glass mat facing material being bound together with an adhesive binder comprising at least 90 wt. percent of an acrylic adhesive binder and

wherein the non-woven glass fiber mat has a coating of a dried aqueous mixture of (i) a mineral pigment, (ii) a polymer adhesive binder and optionally (iii) an inorganic adhesive binder on a free surface of said non-woven glass mat facing material and said coated non-woven glass mat facing material has a porosity which allows water to evaporate through said coated non-woven glass fiber mat from the gypsum core during the preparation of the wallboard.

22. The gypsum wallboard of claim 21 wherein the adhesive binder comprises predominantly an acrylic adhesive binder and the acrylic adhesive binder is a thermoplastic.

23. A gypsum wallboard comprising:

a gypsum core having a planar first face and a planar second face;

a coated non-woven glass fiber mat facing material suitable for level 4 finishing adhered to and covering at least one of the planar first face and the planar second face of the gypsum core, said coated non-woven glass fiber mat facing material having been contacted (i) on a non-

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coated side and (ii) during preparation of the wallboard with an aqueous gypsum slurry that sets to form the gypsum core,

wherein the non-woven glass fiber mat facing material consists essentially of glass fibers of a fiber diameter between about 8 and about 11 microns and a fiber length between ¼ and ¾ inch, the glass fibers of the non-woven glass fiber mat facing material being bound together with an adhesive binder comprising an acrylic adhesive binder and

wherein the non-woven glass fiber mat facing material has a coating comprising a dried aqueous mixture comprising (i) a mineral pigment, (ii) a polymer adhesive binder and optionally (iii) an inorganic adhesive binder on a free surface of said non-woven glass mat facing material and said coated non-woven glass mat facing material has a porosity which allows water to evaporate through said coated non-woven glass fiber mat from the gypsum core during the preparation of the wallboard.

24. The gypsum wallboard of claim 23 wherein at least 75 weight percent of the glass fibers of the non-woven glass fiber mat have a fiber length between ¼ and ½ inch.

25. The gypsum wallboard of claim 23 wherein the coating on the coated non-woven glass fiber mat has a dry weight basis of about 30 to about 60 pounds per 1000 square feet of said coated mat.

26. A gypsum wallboard comprising:

a gypsum core having a planar first face and a planar second face;

a coated non-woven glass fiber mat facing material suitable for level 4 finishing adhered to and covering at least one of the planar first face and the planar second face of the gypsum core, said coated non-woven glass fiber mat facing material having been contacted (i) on a non-coated side and (ii) during preparation of the wallboard with an aqueous gypsum slurry that sets to form the gypsum core,

wherein the non-woven glass fiber mat facing material consists essentially of glass fibers of a fiber diameter between about 8 and about 11 microns and a fiber length between ¼ and ¾ inch, wherein essentially no fibers have a diameter greater than 13 microns, and the non-woven glass fiber mat facing material has a basis weight of between 0.8 and 2.2 lb./100 ft.² and the glass fibers of the non-woven glass mat facing material being bound together with an adhesive binder comprising at least 90 wt. percent of an acrylic adhesive binder and

wherein the non-woven glass fiber mat has a coating of a dried aqueous mixture of (i) a mineral pigment, (ii) a polymer adhesive binder and optionally (iii) an inorganic adhesive binder on a free surface of said non-woven glass mat facing material, said coating having a dry weight basis of about 30 to about 60 pounds per 1000 square feet of said coated mat and said coated non-woven glass mat facing material has a porosity which allows water to evaporate through said coated non-woven glass fiber mat from the gypsum core during the preparation of the wallboard.

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